IN THE SPECIFICATION

Please replace paragraph 42 with the following amended paragraph.

The stator shown in Fig. 1 is not encapsulated and the stator shown in Fig. 2 is encapsulated. The stator 22, which will be described in further detail below, is substantially encapsulated in a thermoplastic material. The encapsulating material also forms legs 36 projecting axially of the stator 22. For the embodiment shown in Fig, 1, an annular ring is used for attachment. The legs 36 each have a catch 38 formed at the distal end of the leg. A printed circuit board generally indicated at 40, is received between the legs 36 in the assembled motor 20, and includes components 42, at least one of which is programmable, mounted on the board. A finger 44 projecting from the board 40 mounts a Hall device 46 which is received inside the encapsulation when the circuit board is disposed between the legs 36 of the stator 22. In the assembled motor 20, the Hall device 46 is in close proximity to the rotor magnet 35 for use in detecting rotor position to control the operation of the motor. The stator 22 also includes a flux tube generally indicated at 48 including a steel tube 49 with a bronze bearing 50 press fitted into steel tube 49. Flux tube 48 has a slit 51 ~~(not shown)~~ extending axially along steel tube 49 to facilitate a reduction in circulating flux. The flux tube has a lip on one end. On the other end, a clip is used to secure the upper laminations to the stator and lower lamination assembly. Slit 51 in flux tube 48 is aligned with a notch provided on upper and lower lamination assemblies. The bearing 50 receives the rotor shaft 32 through the stator 22 for mounting the rotor 24 on the stator to form a subassembly. The rotor 24 is held on the stator 22 by an E clip 52 attached to the free end of the rotor after it is inserted through the stator.

Please replace paragraph 46 with the following amended paragraph.

The housing 26 is also constructed to inhibit motor failures which can be caused by the formation of ice within the cup when the motor 20 is used in a refrigerated environment. More particularly, the printed circuit board 40 has power contacts 74 mounted on and projecting outwardly from the circuit board. These

contacts are aligned with an inner end of a plug receptacle 76 which is formed in the cup 54. Referring to Fig. 2, the receptacle 76 receives a ~~plug 78~~plug (not shown) connected to an electrical power source remote from the motor. External controls (not shown) are also connected to the printed circuit board 40 through the plug 78. The receptacle 76 and the plug 78 have corresponding, rectangular cross sections so that when the plug is inserted, it substantially closes the plug receptacle.

Please replace paragraph 47 with the following amended paragraph.

When the ~~plug 78~~plug is fully inserted into the plug receptacle 76, the power contacts 74 on the printed circuit board 40 are received in the plug, but only partially. The plug receptacle 76 is formed with tabs 80 (near its inner end) which engage the ~~plug 78~~plug and limit the depth of insertion of the plug into the receptacle. As a result, the ~~plug 78~~plug is spaced from the printed circuit board 40 even when it is fully inserted in the plug receptacle 76. In the preferred embodiment, the spacing is about 0.2 inches. However, it is believed that a spacing of about 0.05 inches would work satisfactorily. Notwithstanding the partial reception of the power contacts 74 in the ~~plug 78,~~plug, electrical connection is made. The exposed portions of the power contacts 74, which are made of metal, tend to be subject to the formation of ice when the motor 20 is used in certain refrigeration environments. However, because the ~~plug 78~~plug and circuit board 40 are spaced, the formation of ice does not build pressure between the plug and the circuit board which would push the plug further away from the circuit board, causing electrical disconnection. Ice may and will still form on the exposed power contacts 74, but this will not cause disconnection, or damage to the printed circuit board 40 or the ~~plug 78.~~plug.

Please replace paragraph 49 with the following amended paragraph.

The port 84 is keyed so that the probe can be inserted in only one way into the port. As shown in ~~Fig. 5,~~Fig. 3 the key is manifested as a trough 90 on one side of the port 84. The probe has a corresponding ridge which is received in the trough when the probe is oriented in the proper way relative to the trough. In this way, it is not

possible to incorrectly connect the probe 88 to the programming contacts. If the probe 88 is not properly oriented, it will not be received in the port 84.

Please replace paragraph 68 with the following amended paragraph.

The encapsulated stator 22 is then assembled with the rotor 24 to form the stator/rotor subassembly. A thrust washer (not shown) is put on the rotor shaft 32 and slid down to the fixed end of the rotor shaft in the hub 28. The thrust washer has a rubber-type material on one side capable of absorbing vibrations, and a low friction material on the other side to facilitate a sliding engagement with the stator 22. The low friction material side of the thrust washer faces axially outwardly toward the open end of the hub 28. The stator 22 is then dropped into the hub 28, with the rotor shaft 32 being received through the bearing 50 at the center of the stator. One end of the bearing 50 engages the low friction side of the thrust ~~washer 250~~washer so that the hub 28 can rotate freely with respect to the bearing. Another thrust washer (not shown) is placed on the free end of the bearing 50 and E clip 52 (Fig. 2) is shaped onto the end of the rotor shaft 32 so that the shaft cannot pass back through the bearing. Thus, the rotor 24 is securely mounted on the stator 22.

Please replace paragraph 74 with the following amended paragraph.

The motor 20 can be installed, such as in a refrigerated 10 case, by inserting fasteners (not shown) through the housing 26 and into the case. Thus, the housing 26 is capable of supporting the entire motor. The motor is connected to a power source by plugging the ~~plug 78~~plug into the plug receptacle 76 (Fig. 14). Prior to engaging the printed circuit board 40, the ~~plug 78~~plug engages the locating tabs 80 in the plug receptacle 76 so that in its fully inserted position, the plug is spaced from the printed circuit board. As a result, the power contacts 74 are inserted far enough into the ~~plug 78~~plug to make electrical connection, but are not fully received in the plug. Therefore, although ice can form on the power contacts 74 in the refrigerated case environment, it will not build up between the ~~plug 78~~plug and the circuit board 40 causing disconnection and/or damage.

Please replace paragraph 75 with the following amended paragraph.

Figure 19 is a block diagram of the microprocessor controlled single phase motor 500 according to the invention. The motor 500 is powered by an AC power source 501. The motor 500 includes a stator 502 having a single phase winding. The direct current power from the source 501 is supplied to a power switching circuit via a power supply circuit 503. The power switching circuit may be any circuit for commutating the stator 502 ~~such as~~by using an H-bridge 504 having power switches for selectively connecting the ~~dc power~~AC power source 501 to the single phase winding of the stator 502. A permanent magnet rotor 506 is in magnetic coupling relation to the stator and is rotated by the commutation of the winding and the magnetic field created thereby. Preferably, the motor is an inside-out motor in which the stator is interior to the rotor and the exterior rotor rotates about the interior stator. However, it is also contemplated that the rotor may be located within and internal to an external stator.

Please replace paragraph 84 with the following amended paragraph.

Figure 26 illustrates one exemplary embodiment of the invention in which the microprocessor 514 is programmed according to the flow diagram therein. In particular, the flow diagram of Figure 26 illustrates a mode in which the motor is commutated at a constant air flow rate corresponding to a speed and torque which are defined by tables which exclude resonant points. For example, when the rotor is driving a fan for moving air over a condenser, the motor will have certain ~~speedsat~~speeds at which a resonance will occur causing increased vibration and/or increased audio noise. Speeds at which such vibration and/or noise occur are usually the same or similar and are predictable, particularly when the motor and its associated fan are manufactured to fairly close tolerances. Therefore, the vibration and noise can be minimized by programming the microprocessor to avoid operating at certain speeds or within certain ranges of speeds in which the vibration or noise occurs. As illustrated in Figure 26, the microprocessor 514 would operate in the following

manner. After starting, the microprocessor sets the target variable I to correspond to an initial starting speed pointer defining a constant air flow rate at step 550. For example, I=0. Next, the microprocessor proceeds to step 552 and selects a speed set point (SSP) from a table which correlates each of the variable levels 0 to n to a corresponding speed set point (SSP), to a corresponding power device off time (PDOFFTIM=P_{min}) for minimum power and to a corresponding power device off time (PDOFFTIM=P_{max}) for maximum power.

Please replace paragraph 97 with the following amended paragraph.

~~Figure 21~~Figure 22 illustrates an exemplary embodiment of a strobe circuit 520 for the hall sensor 508. The microprocessor generates a pulse width modulated signal GP5 which intermittently powers the hall sensor 508 as shown in Figure 21 by intermittently closing switch Q7 and providing voltage VB2 to the hall sensor 508 via line HS1.

Please replace paragraph 107 with the following amended paragraph.

During motor run, the flow chart of Fig. 31 is executed during each commutation period. In particular at step 702, the commutation time is first checked to see if the motor has been in this motor position for too long a period of time, in this case 32mS. If it has, a locked rotor is indicated and the program goes to the locked rotor routine at step 704. Otherwise, the program checks to see if the commutation time is greater ~~then OFFTIM~~than OFFTIM at step 706; if it is, the commutation period is greater than 90 electrical degrees and the program branches to step 708 which turns the lower power devices off and exits the routine at step 710. Next, the commutation time is compared at step 712 to ~~PWNSUM.~~PWMSUM. If it is less than PWMSUM, the commutation time is checked at step 714 to see if it is less or equal to PDOFFSUM where if true, the routine is exited at step 716; otherwise the routine branches to step 708 (if step 714 is yes).

IN THE DRAWINGS

Applicants respectfully request approval of the following drawing changes. Figure 19 has been amended to include a reference numeral "518". Applicants submit, in anticipation of approval of the drawings changes, a replacement sheet for Figure 19. Also submitted herewith is an annotated Figure 19 on which the requested changes are reflected in red ink. No new matter has been added.